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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Office of the Secretary Of Defense	Date: February 2018
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Appropriation/Budget Activity	R-1 Program Element (Number/Name)											
0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 1: Basic Research</i>	PE 0601228D8Z I <i>Historically Black Colleges and Universities and Minority-Serving Institutions</i>											
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	-	32.709	25.865	30.412	-	30.412	30.796	31.356	31.893	32.497	Continuing	Continuing
448: <i>Historically Black Colleges and Universities and Minority-Serving Institutions</i>	-	32.709	25.865	30.412	-	30.412	30.796	31.356	31.893	32.497	Continuing	Continuing

A. Mission Description and Budget Item Justification

This program element (PE) provides support for Historically Black Colleges and Universities and Minority-Serving Institutions (HBCU/MI) program in fields of science and engineering that are important to national defense. The Department of Defense (DoD) HBCU/MI program encourages participation of small minority schools as well as large minority research institutions. The program is authorized by 10 U.S.C. § 2362 and is funded by annual appropriations. This competitive program provides support through grants, cooperative agreements, or contracts for research, education assistance, and instrumentation purchases.

Work in this PE provides a foundation to enhance participation of HBCUs/MIs in DoD research, including infrastructure; strengthen research and educational opportunities at HBCUs/MIs and increase the number of minority graduates in the science, technology, engineering, and mathematics (STEM) disciplines important to the national defense; and build a more diverse pool of scientists and engineers to meet future workforce needs.

Work in this PE is performed by the Services' Research Offices and DoD Laboratories (includes the Army Research Laboratory and the Air Force Research Laboratory) for Centers of Excellence (COE). Centers currently funded through cooperative agreements include COEs in Autonomy, Cyber Security, and Research Data Analysis.

B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	23.572	25.865	30.626	-	30.626
Current President's Budget	32.709	25.865	30.412	-	30.412
Total Adjustments	9.137	0.000	-0.214	-	-0.214
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	10.000	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.860	-			
• Other Program Adjustments	-0.003	-	-0.010	-	-0.010
• Economic Assumption	-	-	-0.204	-	-0.204

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Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 1: Basic Research</i>		R-1 Program Element (Number/Name) PE 0601228D8Z I <i>Historically Black Colleges and Universities and Minority-Serving Institutions</i>	
<u>Congressional Add Details (\$ in Millions, and Includes General Reductions)</u>		FY 2017	FY 2018
Project: 448: <i>Historically Black Colleges and Universities and Minority-Serving Institutions</i>			
Congressional Add: <i>HBCU/MI Program Increase</i>		10.000	-
Congressional Add Subtotals for Project: 448		10.000	-
Congressional Add Totals for all Projects		10.000	-
<u>Change Summary Explanation</u> FY 2019 adjustments are reflective of higher priority DoD requirements.			

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Appropriation/Budget Activity 0400 / 1					R-1 Program Element (Number/Name) PE 0601228D8Z / <i>Historically Black Colleges and Universities and Minority-Serving Institutions</i>				Project (Number/Name) 448 / <i>Historically Black Colleges and Universities and Minority-Serving Institutions</i>			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
448: <i>Historically Black Colleges and Universities and Minority-Serving Institutions</i>	-	32.709	25.865	30.412	-	30.412	30.796	31.356	31.893	32.497	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Historically Black Colleges and Universities and Minority-Serving Institutions (HBCU/MI) program provides support in fields of science and engineering that are important to national defense. The Department of Defense (DoD) HBCU/MI Program encourages participation of small minority schools and large minority research institutions. This competitive program provides support through grants or contracts for research, education assistance, instrumentation purchases, and technical assistance as described below.

- Research. The research grants are to further the knowledge in the basic scientific disciplines through theoretical and experimental activities. Collaborative research allows university professors to work directly with military laboratories or other universities.
- Education. Education assistance funds are used by minority institutions to strengthen their academic programs in science, technology, engineering, and mathematics (STEM), thereby increasing the number of under-represented minorities obtaining undergraduate and graduate degrees in these fields. These grants provide equipment, scholarships, cooperative work/study opportunities, visiting faculty programs, summer internship programs, and a variety of other enhancements designed to support students and to encourage them to pursue careers in STEM.
- Instrumentation purchases. The program allows universities to purchase basic laboratory equipment, such as lasers and spectrometers, for enhancements to the basic research efforts.
- Technical assistance. The funds are used to design programs that enhance the ability of minority institutions to successfully compete for future Defense funding by assisting the HBCU/MI community in areas such as proposal writing and administration of grants and contracts.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: Historically Black Colleges and Universities and Minority-Serving Institutions (HBCU/MI)	22.709	25.865	30.412
Description: The HBCU/MI program provides support for research and collaboration with DoD facilities and personnel. The research grants further knowledge in the basic physical scientific and engineering disciplines through theoretical and empirical activities. Collaborative research allows university professors to work directly with DoD laboratories or other universities.			
FY 2018 Plans:			

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2017	FY 2018
Continue efforts from FY 2017. Conduct annual competition of the HBCU/MI program for basic research, student support, and/or equipment/instrumentation. Continue the research and educational collaboration with the Thurgood Marshall College Fund (TMCf) Project, a non-profit organization that assists in the selection of HBCU/MI students and faculty for scholarships, internships, and research in pursuit of science, technology, engineering, and mathematics (STEM) careers. Work towards the goal of increasing the number of FY 2018 summer interns and faculty research fellows from 85 to 100 participants. Monitor established Centers of Excellence in support of the Under Secretary of Defense for Research and Engineering (USD(R&E)) Science and Technology priorities in the areas of Cyber Security, Research Data Analysis, Autonomy, and the newly established FY 2017 Center for STEM Scholars, in response to H.R. 114-139 (accompanying H.R. 2685, the FY 2016 DoD appropriations act) using the FY 2017 DoD HBCU/MI congressional program increase, which required DoD to expand STEM opportunities for underrepresented minorities. Conduct annual review of the Centers. Host outreach activities that will include one webinar and two technical assistance workshops to expose HBCUs/MIs to opportunities in DoD.			
FY 2019 Plans: Continue efforts from FY 2018. Conduct annual competition of the HBCU/MI program for basic research, student support, and/or equipment/instrumentation. Continue the research and educational collaboration with the TMCf. Plan to increase the number of FY 2018 summer interns and faculty research fellows from 100 to 110 participants. Monitor established Centers of Excellence in support of the USD(R&E) Science and Technology priorities in the areas of Cyber Security, Research Data Analysis, Autonomy, and the Center for STEM Scholars, needed to expand STEM opportunities for underrepresented minorities. Conduct annual review of the Centers. Host outreach activities, to include one webinar and two technical assistance workshops to expose HBCUs/MIs to opportunities in DoD.			
FY 2018 to FY 2019 Increase/Decrease Statement: The increase in budget from FY 2018 to FY 2019 will support ten additional student interns.			
Accomplishments/Planned Programs Subtotals		22.709	25.865
		30.412	
		FY 2017	FY 2018
Congressional Add: HBCU/MI Program Increase		10.000	-
FY 2017 Accomplishments: Developed a funding opportunity announcement for the establishment of a HBCU/MI Center of Excellence for STEM Scholars (modeled on the Hopps Scholars program and in furtherance of H.R. 114-139, accompanying H.R. 2685, FY 2016 DoD appropriations act, requiring DoD to address plans to expand STEM opportunities for underrepresented minorities). Graduates are expected to pursue studies and research careers, including at DoD.			

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	FY 2017	FY 2018
Facilitated HBCU/MI student involvement in STEM areas and possible research careers within the Department by placing 81 interns and 15 faculty fellows at DoD laboratories in summer 2017. The interns/fellows gave presentations about their research experiences at an August 2017 Basic Research Office-sponsored event.		
Worked with Air Force Research Laboratory (AFRL) in Rome, New York to provide summer 2017 research opportunities for students from HBCUs/MIs operating the Centers of Excellence for Autonomy, Cyber Security, and Research Data Analysis. The results of these students' summer research experiences were presented at a poster session at AFRL in August 2017.		
Coordinated with the Navy Cyber Security Information Assurance Program Partnership to provide four internship/co-op opportunities for HBCU/MI students in information assurance/cyber security.		
Congressional Adds Subtotals	10.000	-

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

- Number of students funded other than undergraduates
- Number of undergraduate students funded
- Number of undergraduates funded who graduated
- Number of students participating in the Centers of Excellence for Research and Education
- Number of students working in Defense Laboratories
- Number of undergraduates funded who graduated with degrees in STEM
- Number of graduates who will continue to pursue graduate or Ph.D. degrees in STEM
- Number of graduates who intend to work for DoD
- Number of undergraduates who will receive scholarships and fellowships for further studies in STEM